"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

L 46143-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6026736 (A) SOURCE CODE: UR/0183/66/000/003/0021/0023

AUTHOR: Smol'nikova, L. G.; Konkin, A. A.

ORG: Altay Polytechnic Institute im. I. I. Polzunov, Barnaul (Altayskiy politekhnicheskiy institut)

TITLE: Mechanical and thermomechanical properties of sulfur monochloride vulcanized polycaprolactam fibers

SOURCE: Khimicheskiye volokna, no. 3, 1966, 21-23

TOPIC TAGS: synthetic fiber, solid mechanical property, vulcanization

ABSTRACT: The effect of vulcanization with sulfur monochloride on mechanical and thermomechanical (tensile strength, elongation, modulus of elasticity, thermal stability) properties of polycaprolactam resins was investigated. The object of the work was to develop technology for improving the commercial polycaprolactam fiber "kapron No. 34.5". Kapron No. 34.5 fiber samples were vulcanized with S_2Cl_2 (by treatment with a pyridine-containing 5% S_2Cl_2 solution in absolute xylene) to contain 1.1-8.4% combined sulfur and then the tensile strength and elongation were measured after thermal treatment at 21°, for 24 hrs at 150°C, for 1 hr at 200°C, for 0.5 hr at 220°C, and for a 4 hr treatment with water at 100°C. It was found that the introduction of sulfur generally resulted in improved thermal stability of the polycaprolactam fiber.

UDC: 677.494.675

Card 1/2

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L 46143-66
ACC NR: AP6026736

This is explained in terms of the inhibiting effect of sulfur on the chain processes which leads to the thermal decomposition of the polycaprolactam-type fibers. The treatment with water also had a beneficial effect on the thermal stability of the vulcanized polycaprolactam. It was found that up to 2.8% sulfur content there was very little detrimental effect of sulfur on tensile strength of the polycaprolactam fiber. Maximum modulus of elasticity of the polycaprolactam was found to correspond to 6.8% combined sulfur. The x-ray patterns showed that the S_2Cl_2 vulcanized polycaprolactam retained practically all of the original crystallinity. Orig. art. has: 3 figures, 2 tables.

SUB CODE: 11/07/ SUBM DATE: 22Mar65/ ORIG REF: 006/ OTH REF: 004

Card 2/2 mjs

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOL'NIKOVA, N.I.

Reducing the toxicity of tubazid through simultaneous use with cycloserine. Biul. eksp. biol. i med. 52 no.8:70-72 Ag '61. (MIRA 15:1)

1. Iz otdela eksperimental'noy khimioterapii (zav. - prof. A.M.Chernukh) Instituta farmakologii i khimioterapii (dir. - deystvitel'nyy chlen AMN SSSR V.V.Zakusov) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Zakusovym.
(TUBAZID) (CYCLOSERINE)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

KIFMAN, G.Ya., IVANOVA, G.A., SMOL'NIKOVA, N.M.

Pharmacology of the tetracyclines [with summary in English]
Farm. i toks. 21 no.5:68-72 S-O '58 (MIRA 11:11)

1. Otdel khimioterapii (zav. - chlen-korrespondent AMN SSSR prof. Kh.Kh. Planel'yes) Instituta farmakologii i khimioterapii AMN SSSR.
(TETRACYCLINE,
pharmacol. (Rus))

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

KIVMAN, G.Ya.; SMOL'NIKOVA, N.M.; IVANOVA, G.A.; MITROFANOV, V.S.

Pharmacology of a new antibiotic cycloserine. Farm. i toks. 22 no.3: 243-246 My-Je '59. (MIRA 12:7)

1. Otdel eksperimental'noy khimioterapii (zav. - doktor meditsinskikh nauk A.M. Chermukh) Instituta farmakologii i khimioterapii AMN SSSR.
(ANTIBIOTICS,
cycloserine, pharmacol. (Rus))

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

KIVMAN, G.Ya.; SMEL'NIKOVA, N.M.; IVANOVA, G.A.

Convulsive effect of cycloserine under experimental conditions. Farm.i toks. 22 no.5:447-450 S-O '59. (MIRA 13:3)

1. Otdel eksperimental'noy khimioterapii (zaveduyushchiy - prof. A.M. Chernukh) Instituta farmakologii i khimioterapii AMN SSSR.
(CYCLOSERINE pharmacol.)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

KIVMAN, G.Ya.; CHUMACHENKO, N.V.; SMOL'NIKOVA, N.M.; MITROFANOV, V.S.; RUKHADZE, E.Z.

Hypersensitivity of rabbits to tetracyclines. Biul.eksp.biol. i med. 48 no.10:52-56 O '59. (MIRA 13:2)

1. Iz otdela khimioterapii (zav. - doktor med.nauk A.M. Chernukh) Instituta farmakologii i khimioterapii (dir. - deystvitel'nyy chlen AMN SSSR V.V. Zakusov) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.V. Zakusovym.
(TETRACYCLINE pharmacol.)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

KIVMAN, G.Ya.; SMOL'NKOVA, N.M.

Comparative study on the binding of antibiotics of the tetracycline group by organ homogenates. Biul.eksp.biol.i med. 48 no.12:68-71 D '59. (MIRA 13:5)

1. Iz otdela eksperimental'noy khimioterapii (zav. - prof. A.M. Chermukh) Instituta farmakologii i khimioterapii (dir. - deystvitel'nyy chlen AMN SSSR V.V. Zakusov) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.V. Zakusovym.
(TETRACYCLINE metab.)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOL'NIKOVA, N.M.

Effect of d,l-cycloserine and thianide on blood morphology.
Antibiotiki 5 no.6:97-99 N-D '60. (MIRA 14:3)

1. Otdel eksperimental'noy khimioterapii (zav. - prof. A.M.Chernukh)
Instituta farmakologii i khimioterapii AMN SSSR.
(ISOXAZOLIDINONE) (BLOOD CELLS)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

KIVMAN, G.Ya.; SMOL'NIKOVA, N.M.

Absorption of antibiotics from the tetracycline group in the intestines. Antibiotiki 6 no.8:702-704 Ag '61. (MIRA 15:6)

1. Otdel eksperimental'noy khimioterapii (zav. - prof. A.M. Chernukh) Instituta farmakologii i khimioterapii AMN SSSR.

(TETRACYCLINE) (INTESTINES)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOL'NIKOVA, N.M.; KIVMAN, G.Ya.

Antagonism between cycloserine and some analeptics. Farm. i toks. 24 no.5:592-594 S-O '61. (MIRA 14:10)

1. Otdel eksperimental'noy khimioterapii (zav. - prof. A.M.Chernukh) Instituta farmakologii i khimioterapii AMN SSSR.
(CYCLOSERINE) (ANALEPTICS)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOL'NIKOVA, N.M.

Distribution of D,L-and D-cycloserine in the body of white mice.
Antibiotiki 8 no.5:434-438 My'63 (MIRA 17:9)

1. Otdel khimioterapii (zav. - prof. A.M. Chernukh) Instituta farmakologii i khimioterapii AMN SSSR.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOL'NIKOVA, N.M.; KIVMAN, G.Ya.

Relationship between the dose of DL- and D-cycloserine and the effect on the convulsive action of some analeptics. Farm. i toks. 26 no.1:17-22 Ja-F '63. (MIRA 17:7)

1. Otdel khimioterapii (zav. - prof. A.M. Chernukh) Instituta farmakologii i khimioterapii AMN SSSR.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

KIVMAN, G.Ya.; SOKOLOVA, N.N.

Production and comparative studies on racemates and stereoisomers of cycloserine. Antibiotiki 8 no.9:845-860 S '63. (MIRA 17:11)

1. Institut farmakologii i khimioterapii AMN SSSR.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SNOL'NIKOVA, N.M.

Analysis of the depressive action of d,l- and d-cycloserine on the central nervous system. Biul. eksp. biol. i med. 55 no.3: Mr '63. (MIRA 18:2)

1. Iz otdela khimioterapii (zav. - prof. A.M. Chenykh) Instituta farmakologii i khimioterapii (direktor - deystvitel'nyy chlen AMN SSSR V.V. Zakusov) AMN SSSR, Moskva. Submitted June 23, 1961.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

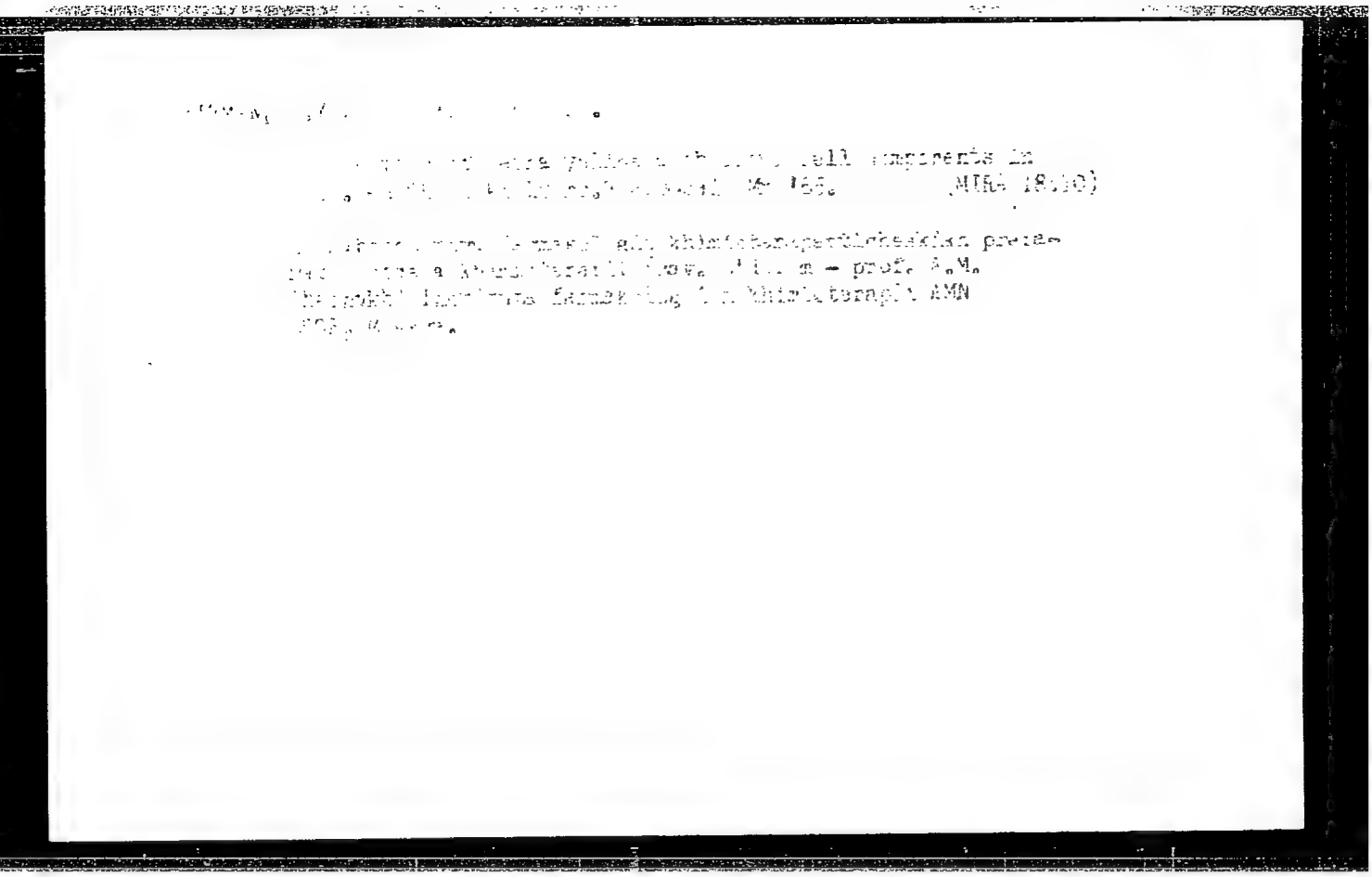
KIVMAN, G.Ya., ...OL'NIKOVA, N.M.

Indices of the clearance of the blood serum of D- and D,L,-cycloserine in rabbits. Antibiotiki 9 no.12:1060-1066 D '64.
(MIRA 18:7)

1. Laboratoriya farmakologii otdela khimioterapii (zav. - prof. A.M. Chernukh) Instituta farmakologii i khimioterapii AMN SSSR, Moskva.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0



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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOL'NIKOVA, N.M.

Relation between the chemical structure and the spasmodic effect of the cycloserine series and related compounds. Farm. i toks. 28 no.5:599-603 S-O '65. (MIRA 18:12)

1. Laboratoriya farmakologii otdela khimioterapii (zav. - prof. A.M.Chernykh) Instituta farmakologii i khimioterapii AMN SSSR, Moskva. Submitted February 22, 1964.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOL'NIKOVA, Ye. B.

Instrument for precision measurement of air blast supplied by turboblowers. Biul. TSNIICHM no. 8:37 '58. (MIRA 11:7)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat
(Flowmeters)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLNITSKI, K., inzh.

Mechanization of the building work of the Sovbolstroi Enterprise.
Tekhnika Bulg 2 no.6:13-19 Je '53.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

S.GILI[illegible], [illegible]., [illegible]V, V., and MIAKOV, V.

"What the Experience of Operating Specialized Heavy Machinery in Construction Indicates."

p. 12 (Stroitelstvo, Vol. 5, No. 7, 195[illegible], Sofiia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. , No. 11, Nov. 195[illegible]

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLNITSKI, K; ABADZHIEV, E.

"More complete utlization of the tower crane in Bulgarian construction."

STROITELSTVO, Sofiia, Bulgaria, Vol. 6, no. 6, 1959

S/p/t.

Monthly list of East Europe Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclas

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

ACCESSION NR: AP4042621 S/0096/64/000/006/0077/0080

AUTHORS: Smol'nitskiy, S. G. (Candidate of technical sciences); Kazanskiy, V. N. (Engineer)

TITLE: New construction of oil-air settling chamber for turbomachines

SOURCE: Teploenergetika, no. 8, 1964, 77-80

TOPIC TAGS: steam turbine, synthetic oil, flow rate,/"L" GOST 32 53 oil, LMZ oil, MEI oil, K 100 90 turbine

ABSTRACT: The design and development details of a multistage oil-air separation tank (used in gas or steam turbines) are presented. Mineral or synthetic oils mixed with air bubbles reach a set of baffles where the air bubbles accumulate into coarse spheroids, slide up sloping plates (4) (see Fig. 1 on the Enclosures) and are carried out to the surface through a clearance between the pockets and the wall of the reservoir. Screening flanges (3 and 5,) prevent air bubbles from floating away into the air-free oil compartment of the reservoir. The flow separation details are shown in Fig. 2 on the Enclosures. Experiments show the most effective sloping angle for air-bubble removal to be $\alpha = \beta = 0$. This, however, has to be matched against speedy evacuation of the oil through the

Card 1/4

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ACCESSION NR: AP4042621

chamber which requires a high α. Optimum angle is then determined to be $\alpha = 14{,}5\sqrt[3]{w}$, where w - mean air-bubble speed in the flow periphery. The length L, required for complete removal of bubbles, is given by $L = \frac{h \cdot v'}{v'' \cdot \cos\alpha}$, where $v' = \frac{10^4 Q}{3600(1-\varphi_0)BHn\cos\alpha}$, and h- distance between baffles, v" - air-bubble velocity, Q- oil flow rate, ϕ_0 - air concentration before reaching baffles, B, H- height and width of pockets, n- number of pockets per reservoir length. A semiompirical formula is derived for optimum baffle angle as a function of initial air-bubble concentration ϕ_0 and oil flow rate Q and various experimental curves are obtained for ϕ versus Q and ϕ versus α, using oils "L" GOST 32-53, LMZ, and MEI in the K-100-90 turbine. Orig. art. has: 5 formulas and 4 figures.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Institute for Power Engineering)

SUBMITTED: 00 ENCL: 02

SUB CODE: IE NO REF SOV: 005 OTHER: 000

Card 2/4

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLNYAKOV

Country	:	USSR
Category	:	Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi
Abs. Jour.	:	Ref Zhur-Biol, No 23, 1958, No 105809
Author	:	Ovsyanov, N. I.; Buzmakov, I. G.; Svintsova,*
Institut.	:	Siberian Scientific Research Veterinary Institute
Title	:	Study of the Effectiveness of Albamycin in Paratyphoid and Pneumonias of Calves
Orig. Pub.	:	Byul. nauchno-tekhn. inform. Sibirsk. n.-i. vet. in-t, 1958, No 3, 24-26
Abstract	:	It was shown that albamycin produces a positive effect only in recent cases of disease when administered subcutaneously in a dose of 50,000-70,000 units per 1 kg. of body weight, once or twice a day during the whole period of disease until clinical recovery is achieved.-- A. D. Musin
		* K. G.; Smol'nyakov, V. I.; Falikov, N. M.
Card:		1/1

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SIOLOGA, Jerzy; TOMASZEWSKI, Maciej; KOZMINSKI, Anna.

Critical and experimental studies on the determination of instruments used from the appearance of the wound. Arch.med. sad., Warszawa 6:132-148 1955.

1. Z Zakladu Medycyny Sadowej AM w Krakowie. Kierownik: prof. dr J. Olbrycht.

(WOUNDS AND INJURIES,
cranium, wound shape as basis for determ. of instrument used, in forensic testimony.)
(CRANIUM, wounds and injuries,
wound shape as basis for determ. of instrument used, in forensic testimony)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLOGOVETS, P.V.

Endocrine function of the pancreas in peptic ulcer and chronic gastritis based on the indices of carbohydrate metabolism. Sov. med. 28 no.5:71-75 My '65. (MIRA 18:5)

1. Laboratoriya funktional'noy diagnostiki (zav. P.V.Smologovets) Ukrainskogo nauchno-issledovatel'skogo instituta pitaniya, Kiyev.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

S/032/62/028/011/008/015
B104/B102

AUTHORS: Sinitsyn, V. V., Kalashnikov, V. P., Baybakova, L. L., Smolokotina, Z. G. and Chukhrova, A. V.

TITLE: Method of estimating the oxidizability of lubricating greases

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 11, 1962, 1352 - 1354

TEXT: Following thorough consideration of the optimum quantity of grease whose oxidizability is to be determined, its optimum temperature, and optimum oxidation time, the following procedure is suggested using results published in Soviet and non-Soviet papers (F. T. Wright, H. A. Mills, Proc. ASTM, 38, II (1938)): 1.7 - 1.9 g of grease is put into a small cup of electrolytic copper, or a slice of grease (1 ± 0.05 mm thick, 50 mm diameter) is applied to a glass plate by means of a template. The small cup or the glass plate are then enclosed in a Petri cup and are kept in a thermostat at a certain temperature for 5 - 200 hrs. Before and after the test, the acid number of the grease is determined according to ГОСТ 6707-57 (GOST 6707-57). The index of oxidation of the acid is defined as being the difference between the acid numbers before and after the test. Temper-

Card 1/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

Method of estimating the...

ature and time of the experiment are fixed according to the mode of application of the grease. The high stability of ЦИАТИМ-201 (TsIATIM-201), ЦИАТИМ-202 (TsIATIM-202), and 1-Б3 (1-L3) is due to the content of diphenyls, that of ЦИАТИМ-203 (TsIATIM-203) and ЯНЗ-2 (YaNZ-2) to the content of sulfurous compounds, and that of ЦИАТИМ-203 (TsIATIM-203) is due also to the additional content of triphenyl phosphate. ЦИАТИМ-221 (TsIATIM-221) practically does not oxidize, because of the high stability of polysiloxanes. There are 2 figures and 1 table.

ASSOCIATION: Moskovskiy zavod "Neftegaz" (Moscow "Neftegaz" Plant)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLONOGOV, Ye. [redacted] Cand Agr Sci -- (diss) "Silvicultural substantiation of methods of [redacted] forest-rehabilitating tree felling in mixed forests of the restricted belt of Ufa River. (Southwestern Sverdlovskaya Oblast)." Sverdlovsk, 1959. 27 pp (Min of Higher Education USSR. Ural Forestry Engineering Inst), 100 copies (KL, 52-59, 124)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLONOGOV, Ye.P.

Dynamics of the age structure and stand composition in mixed deciduous-fir-spruce forests of the Urals. Trudy Inst.biol.UFAN SSSR no.14:39-54 '60. (MIRA 14:6)
(Ural Mountain region—Forests and forestry—Valuation)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLOGOGOV, Ye.P.

Data on microclimatic characteristics of clear-cut areas. Trudy Inst. biol. UFAN SSSR no.16:25-39 '60. (MIRA 13:10)
(Microclimatology) (Forests and forestry)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLONOGOV, Ye.P.

Natural regeneration in clear-cut areas of the pine forests of the eastern slope of the Central Urals and the trans-Ural region. Trudy Inst. biol. UFAN SSSR no.16:53-69 '60. (MIRA 13:10)
(Ural Mountain region—Reforestation)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

[illegible]NOGOV, Ye.P.; NIKULIN, V.I.; KOLESNIKOV, B.P., prof., doktor biol. nauk, otv. red.; KOSYAKOV, P.C., kand. ekon. nauk, otv. red.; PAL'MIN, M.Z., tekhn. red.

[Natural and economic conditions of the utilization of forests in the southern part of the Ural Area of the Ob' Valley] Prirodnye i ekonomicheskie usloviia ekspluatatsii lesov v iuzhnoi chasti Ural'skogo Priob'ia. Sverdlovsk, AN SSSR, 1963. 119 p. (MIRA 16:8)
(Ob' Valley--Forests and forestry--Economic aspects)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMELOV, B.M.

SOV/144-58-9-18/18

AUTHOR: Gikis, A. F., Candidate of Technical Sciences, Docent

TITLE: Inter-University Scientific Conference on Electric Measuring Instruments and Technical Means of Automation (Mezhvuzovskaya nauchnaya konferentsiya po elektroizmeritel'nym priboram i tekhnicheskim sredstvam avtomatiki)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika, 1958, Nr 9, pp 130-135 (USSR)

ABSTRACT: The conference was held at the Leningradskiy elektrotekhnicheskiy institut imeni V. I. Ul'yanova (Lenina) (Leningrad Electro-technical Institute imeni V. I. Ul'yanov (Lenin)) on November 11-15, 1958. The representatives of eleven higher teaching establishments and three research institutes participated and a large number of specialists of various industrial undertakings were present.

Docent B. M. Smolov (Leningrad Electro-Technical Institute) read the paper "Non-linear electronic voltage transformers with a numerical output", in which he considered two methods of transforming voltages into a numerical code.

V. P. Skuridin (Ural Polytechnical Institute imeni S. M. Kirov) presented the paper "New counters based on polarized relays". These do not suffer from the

Card 5/13

disadvantage of existing counters, namely, that the results are lost if the current supply is accidentally interrupted.

Professor A. V. Frenke and Docent Ye. M. Dushin (Leningrad Electro-Technical Institute) presented the paper "Metering transducers for automatic instruments with discrete types of recording".

Candidate of Technical Sciences V. B. Ushakov and P. M. Kopay-Gora (Scientific Research Institute for Computers) presented the paper "Computing equipment for automatic centralized control of production parameters".

Candidate of Technical Sciences V. B. Ushakov presented the paper "Certain trends in the development of analogue computers and of computing devices intended for use in industry".

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SMOLOV, V.B.

VEREBRYUSOV, I.A., dotsent, kandidat tekhnicheskikh nauk; AFOSHIN, A.N., kandidat tekhnicheskikh nauk, redaktor; NOVOSEL'TSEV, Ya.V., kandidat tekhnicheskikh nauk, retsenzent; SMOLOV, V.B., kandidat tekhnicheskikh nauk, retsenzent; TAKHVANOV, G.I., kandidat tekhnicheskikh nauk, retsenzent; PETERSON, M.M., tekhnicheskiy redaktor

[Synchro transfer and servomechanisms] Sinkhronnye peredachi i sledíashchie sistemy. Leningrad, Gos. soiuznoe nauchno-tekhn. izd-vo sudostroitel'noi promyshl., 1954. 240 p. (MLRA 7:10)
(Servomechanisms) (Automatic control)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLOV, V. B.

AID P - 641

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 10/34

Authors : Novosel'tsev, Ya. V., Kand. of Tech. Sci., Smolov, V. B., Kand. of Tech. Sci. and Takhvanov, G. I., Kand. of Tech. Sci., Leningrad

Title : Vacuum-tube functional converters for multiplying voltages

Periodical : Elektrichestvo, 9, 45-49, S 1954

Abstract : A computing arrangement for multiplication of two voltages U_1 and U_2 is based on equation $U_1 U_2 = \frac{1}{4}[(U_1+U_2)^2-(U_1-U_2)^2]$. The raising to the square is performed by a vacuum tube circuit, the theory and diagram of which are presented. 9 diagrams.

Institution : Leningrad Institute of Electrical Engineering im. Ul'yanov (Lenin)

Submitted : Ap 20, 1954

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SOV/146-58-4-12/22

9(2,3), 16(1)

AUTHOR: Smolov, V.B., Candidate of Technical Sciences, Docent

TITLE: A Method of Modelling Integro-Differentiating Functions

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Priborostroyeniye, 1958, Nr 4, pp 69-75 (USSR)

ABSTRACT: Modelling of the integro-differentiating functions of the type

$$V_{vykh} = \sum_{k=1}^{k=m} V_{vkh.k}\left(\sum_{s=1}^{s=n} A_{ks}p^{s} + \sum_{s=0}^{s=l} B_{ks}p^{-s}\right) \qquad (1)$$

where p is operator of differentiation, is of great practical importance for the development of specialized electronic analog computers and for the correction of electrical automatic control systems. The known operational amplifiers with anode-grid negative feedback, connected as shown in the block diagram in Figure 1, may be used for realizing the function (1), whereby

Card 1/6

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A Method of Modelling Integro-Differentiating Functions

the parameters of the input circuit z_{1k}, and the feedback circuit z_2 may be selected. The block diagram shown in Figure 1 may be expressed by the equation

$$\frac{V_{vykh}}{\mu} = \frac{1}{\frac{1}{z_2} + \sum_{k=1}^{k=m} \frac{1}{z_{1k}}} \left(\sum_{k=1}^{k=m} \frac{V_{vkh.k}}{z_{1k}} - \frac{V_{vykh}}{z_2} \right) \qquad (2)$$

For increasing the power (s) of the polynom (1) without application of some inductance, the block diagram shown in Figure 2, for an operational amplifier is of interest. The dynamic equilibrium of the amplifier is characterized by the following equation system

Card 2/6

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A Method of Modelling Integro-Differentiating Functions

$$\left.\begin{aligned} &\sum_{k=1}^{k=n} \frac{V_{xK} - V_{g1}}{z_{xk}} + \sum_{j=1}^{j=m} \frac{V_{yj} - V_{g2}}{z_{yj}} = \frac{V_{g2} - V_{yxkh}}{z_z} \\ &V_{g2} = V_{j1} - z_2 \sum_{k=1}^{k=m} \frac{V_{xK} - V_{g1}}{z_{yk}} \\ &V_{g1} = \frac{V_{yxkh}}{\mu} \end{aligned}\right\} \qquad (6)$$

The comparison of the formulae for the outlet voltages of the block diagrams shown in Figure 1 and 2 has the following results: 1) The function (1) may be modelled only when complying with the condition (3) - the resistances of the input circuits are parallel-connected, while the resistance of the feedback circuit is series-connected of R, L, C.

Card 3/6

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$$\left.\begin{aligned} \frac{1}{z_{1k}} &= \frac{1}{R_{1k}} + \frac{1}{pL_{1k}} + pC_{1k} \\ z_2 &= R_2 + pL_2 + \frac{1}{pC_2} \end{aligned}\right\} \qquad (3)$$

2) The power of the polynom to be modelled may be higher than 1 for the block diagram shown in Figure 2, even in the absence of inductances. 3) The block diagram of the amplifier shown in Figure 1 is a special case of the block diagram Figure 2, and it is obvious that

$$\left.\begin{aligned} V_{yj} &= 0, \\ Z_{yj} &= \infty, \end{aligned}\right\} \quad j = 1,2,\ldots m$$

Card 4/6 One of the most frequent versions of the function (1) is the dependence:

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$$V_{vykh} = V_{vkh}\left(\sum_{k=0}^{k=1} A_k p^k + \sum_{j=1}^{j=2} B_j p^{-j}\right) \qquad (10)$$

For modelling the latter, block diagram, Figure 2, may be used in two versions, according to the block diagram shown in Figures 3 and 4. For increasing the power of the polynom to be modelled (1) it is necessary to use a more general circuit connection for the operational amplifier, as shown in Figure 5. In the conclusions the author points out that the block diagrams of connecting operational amplifiers permit modelling of the integro-differentiating function (1) at any powers of s without the application of inductive resistances. Using the block diagram shown in Figure 2, two different functions (1) may be modelled by one amplifier, whereby it is necessary to obtain two output voltages V_{vykh} and V_{q2}. The instrument error of

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLOV, V.B., kand.tekhn.nauk

Universal diode function generator. Izv.vys.ucheb.zav.; prib. no.5:14-18 '58. (MIRA 12:6)

1. Leningradskiy elektrotekhnicheskiy institut im. V.I. Ul'yanova (Lenina).
(Electromechanical analogies) (Diodes)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

66201

~~8(3)~~ 16.9500 SOV/146-58-6-1/16

AUTHORS: Smolov, V.B., Candidate of Technical Sciences, Smirnov, N.A., Assistant, and Nazarov, I.A., Candidate of Technical Sciences

TITLE: Application of Rotating Transformers (VT) as Functional Transformers of Approximate Action

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, 1958, Nr 6, pp 3-13 (USSR)

ABSTRACT: The rotating transformers (VT) are typical induction components of electromechanical modulating plants, and serve for the realization of equations of the type: $U_{21} = K_{T_1} U_{11} \cos \varphi - K_{T_2} U_{12} \sin \varphi$

$U_{22} = K_{T_2} U_{11} \sin \varphi + K_{T_4} U_{12} \cos \varphi$, where K_{T_1}, K_{T_2}, K_{T_3}, K_{T_4} are transformation coefficients. In accordance with the above formulae, the VT can be used for the following operations: a) Turning of axes of a rect-

Card 1/3

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Application of Rotating Transformers (VT) as Functional Transformers of Approximate Action

angular coordinates system at an angle ; b) computing the tension values U_{11} and U_{12} at . = 45° = const.; c) scanning of vector $R(U_{11}$.) into its components U_{21} and U_{22} in a rectangular cocrdinates system; d) building of vector $R(U_{22}$,) in a rectangular coordinates system; e) multiplying the value U_{11} by a constant multiplier. The number of operations which can be performed with the aid of VT will be considerably increased if special connection layouts will be used. The layout FP (Figure 2) realizes the trigonometric polynom

$$z(x) = \sum_{k=0}^{n} A_k x^k \quad (0 \quad x \quad x_{max})$$

In using electronic numerical computation devices with different control layouts, it is often an advantage to have functional transformers which transform the ingoing continuous values into discrete ones. These transformers, unlike linear transformers, realize the

Card 2/3

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Application of Rotating Transformers (VT) as Functional Transformers of Approximate Action

transformation as $N = f(\gamma)$

$$N = f(U_{Bx})$$

The analyzed layout of VT in a capacity of FP of approximate action permits enlarging of the field in which the standard induction elements of computation designs of continuous or discrete action are used. There are 1 table, 4 graphs, 8 schematic diagrams and 2 Soviet references.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut imeni V.I. Ul'yanova (Lenina) (Leningrad Electrotechnical Institute imeni V.I. Ul'yanov (Lenin))

SUBMITTED: September 6, 1958

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

AUTHOR: Smolov, V.B. SOV/115-58-6-28/43

TITLE: Electronic Dividing Transformers with Digital Reading (Elektronnyye delitel'nyye preobrazovateli s tsifrovym otschëtom)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 6, pp 67-69 (USSR)

ABSTRACT: Some measuring devices used in systems for the control of continuous processes are employed for dividing two continuous values x and y which are given as d-c tensions U_x and U_y. These devices are very complicated. Time-impulse devices are considered here for this task because they are simpler. A block diagram for such a dividing transformer with a logarithmic scale is given in Figure 1; the corresponding time diagram in Figure 2. If the generator of exponential tensions is replaced by a generator of linear-rising or linear-falling tensions, the diagram is transformed into one with linear scale (Figure 3). The mentioned devices need precise and exact tension generators, which is one of their drawbacks. Other devices, called time demodulators, transform a time interval into a corresponding d-c tension (Ref. 1). Several circuits of such devices are shown in Figure 4. The corresponding block diagram is given in Figure 5.
There are 6 diagrams and 1 Soviet reference.

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28(1)
AUTHOR: Smolov, V. B. (Leningrad) SOV/103-19-12-7/9

TITLE: Computing Amplifier With Differential Input (Reshayushchiy usilitel' s differentsial'nym vkhodom)

PERIODICAL: Avtomatika i telemekhanika, 1958, Vol 19, Nr 12, pp 1145 - 1149 (USSR)

ABSTRACT: In this paper block diagrams of amplifiers are presented. These amplifiers permit to simulate the majority of practically important integro-differential functions. This is due to a special structure of the input circuits and of the feedback circuits. This computing amplifier with a differential input is an all-round apparatus. It is capable of simulating the operations (algebraic summation, integration, differentiation and more complicated forms of integro-differential functions) avoiding an inversion of the sign of the input voltage. Hence the special operations (inversion) effecting a change in sign, which are connected with the introduction of supplementary amplifiers with $\mu = -1$ can be excluded from the simulating schemes. The accuracy of the amplifiers described here is somewhat inferior to that of

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conventional computing amplifiers because of the error caused by the voltage drop at the differential cascade. With the help of the conventional (series) amplifiers, however, it is much more complicated to solve schematically simulation problems of the operations listed in the table. If the input voltage is zero the amplifier operates as ordinary amplifier with a negative anode-grid feedback.
There are 1 figure and 3 tables.

SUBMITTED: October 23, 1957

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

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D251/D304

11,8000

AUTHOR: Smolov, V.B. (Leningrad)

TITLE: An amplifier with digital controlled resistances

PERIODICAL: Avtomatyka, no, 4, 1960, 65 - 73

TEXT: The author describes the use of computer amplifiers with digital controlled resistances for processing data presented in the form of direct or alternating voltages. Circuits are given for the cases of ohmic and capacitative controlled resistances. The mathematical basis of the method is given which leads to the formula for the characteristic of the amplifier

$$U_{x0} = -\frac{1}{\sum_{l=1}^{l-m_1} \frac{1}{s-s_l}} \cdot \sum_{j=1}^{j-m_1} \frac{U_{yj}}{\sum_{q=1}^{q-q_j} B_{jq} N_{xjq}} \cdot \qquad (16)$$

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B019/B054

9.7400

AUTHOR: Smolov, V. B.

TITLE: A Multichannel Control Digital Analog Voltage Divider

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, 1960. Vol 3, No. 5, pp. 79 - 87

/B

TEXT: The voltage divider investigated here was designed on the basis of "digital resistors". First, it is pointed out that electronic control voltage dividers are widely used in computer engineering for various functional converters in simulators and control machines. It is shown that the circuit of a functional converter, which contains one multichannel control voltage divider and a group of resonance filter, includes some single-channel control voltage dividers. This makes it possible to use multichannel functional converters instead of single-channel converters for the simulation of various functions while the simulation accuracy is maintained and the circuit of the converter simplified. The author thoroughly discusses a multichannel control voltage divider with digital control resistors, and two block diagrams for the simulation of power

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A Multichannel Control Digital Analog Voltage Divider

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functions. The accuracy and stability of the multichannel voltage dividers studied depends on the elements in the output lines, and on the amplification coefficient of the feedback circuit. In contrast to single-channel voltage dividers, the accuracy of multichannel dividers does not depend on the digital control resistors but on the key elements performing the commutation of these resistors. This is very important in practice. As multichannel converters have not yet been tested, the accuracy can only be estimated by comparison with single-channel converters. The publication of this article was recommended by the Kafedra schetno-reshayushchey tekhniki (Chair of Computer Engineering). There are 6 figures and 6 Soviet references.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut imeni V. I. Ul'yanova (Lenina) (Leningrad Electrotechnical Institute imeni V. I. Ul'yanov (Lenin))

SUBMITTED: December 23, 1959

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLOV, Vladimir Borisovich; VCHTENBERG, I.M., red.; VORONIN, K.P., tekhn. red.

[Computer converters with digitally controllled resistances] Vychislitel'nye preobrazovateli s tsifrovymi upravliaemymi soprotivleniiami. Moskva, Gos. energ. izd-vo, 1961. 134 p. (Biblioteka po avtomatike, no.31) (MIRA 14:11)
(Automatic control) (Electronic calculating machines)
(Electric network analyzers)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

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S/146/61/004/006/007/020
D201/D301

9,7200

AUTHORS: Smirnov, N. A., Smolov, V. B. and Ugryumov, Ye. P.

TITLE: Time-pulse transistorized multiplier-divider

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 6, 1961, 47-56

TEXT: The authors describe compact transistorized time-pulse instruments performing operations of the type of

$$V_{out} = K_1 \frac{V_1 V_2}{V_o} \qquad (1)$$

where K_1 is a constant with values of inputs V_1, V_2 and V_o, given by d.c. voltages with max. relative errors of 1%; the instruments have time constants of the order of 20/sec, and are meant to ope-

Card 1/4

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Time-pulse transistorized ...

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rate at constant ambient temperatures (≈± 10°C with respect to the set zero temperature). The instruments were designed at the Department of the Analogue Computer Techniques of the LETI im. V. I. Ul'yanov (Lenin) on the closed-loop system principle. A block diagram of the computer is given in Fig. 1. It consists of three main units (shown by dotted lines). Unit 1- a pulse width modulator; 2 - pulse amplitude divider; 3 - a voltage difference amplifier. Operation of the circuit is briefly discussed and sources of errors are determined. The carrier frequency in the described arrangement was 2 - 5 kc/s. Higher frequencies lower the accuracy owing to increased pulse distortion. Emitter followers are used as buffer stages throughout. Requirements as to the integrating networks are stated to be non-critical which makes it possible to use passive RC-networks for this purpose. The d.c. amplifier is a three-stage balanced one with a cathode follower output, overall gain 1000, with series-connected complementary transistor stages. The requirements as to the characteristics of transistors for a multiplier-divider arrangement may be summarized as follows: a) High operating voltages; b) large ß; c) high f_α; d) small I_c0.

Card 2/4

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D201/D301

Time-pulse transistorized ...

SUBMITTED: November 9, 1960

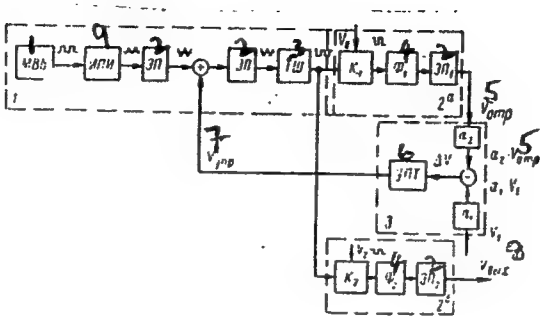

Fig. 1

Legend: 1 - multivibrator; 2 - emitter follower; 3 - Schmitt trigger; 4 - filter; 5 - V_{-ve}; 6 - d.c. amplifier; 7 - $V_{control}$; 8 - V_{out}; 9 - right-angle impulse integrator

Card 4/4

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLOV, V.B.

Universal code converters for automatic measuring systems.
Izm.tekh. no.11:30-35 N '61. (MIRA 14:11)
(Electronic analog computers)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

S/103/61/022/002/006/015
B019/B060

9,7400

AUTHOR: Smolov, V. B. (Leningrad)

TITLE: Electronic decoding and coding functional converters

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 2, 1961, 209-215

TEXT: Coding and decoding converters in automatic systems convert numerical data into analog quantities and vice versa. One speaks in terms of a functional coding and decoding if the relations

$$U = K_U \Phi(N) \qquad (3)$$

$$N = K_N F(U) \qquad (4)$$

hold between the numerical information and the analog quantities (voltage or current). K_U and K_N are coefficients. Coding and decoding converters must therefore possess the characteristics $U_{put} = F(U_{in})$ and $N_{out} = \Phi(N_{in})$. Functional decoding systems can be worked out by using piecewise linear, piecewise stepped, piecewise nonlinear, and smooth approximations of func-

Card 1/5

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Electronic decoding and ...

tion (3). The author restricts himself to piecewise linear approximation as can be realized with the simplest circuits. Functional decoding systems can be worked out as voltage dividers, whose division factor is changed stepwise. In addition to the basic diagram of such a functional converter, the discussion covers the examples (Fig. 3) of linear decoding systems with constant output resistances. The calculation, extending over twelve sections, of such converters, is discussed thoroughly. It is further shown that functional decoding converters working under small or changing loads, can be worked out as active circuits. This is discussed with the aid of the diagram, shown in Fig. 4, of an active decoding functional converter. Coding functional converters can be worked as open and closed circuits out for the realization of relation (4). In the first case, the functional coding is performed by the use of a special mask in coding converters with a cathode ray tube. Such complicated systems are, however, of minor importance. Closed circuits of functional coding converters are electronic pulse servosystems whose feedback circuit includes an earlier described functional decoding converter. Fig. 5 shows the block diagram of such a functional coding converter, and the latter is discussed on the basis of the said diagram. There are 5 figures and 8 references: 5 Soviet

Card 2/5

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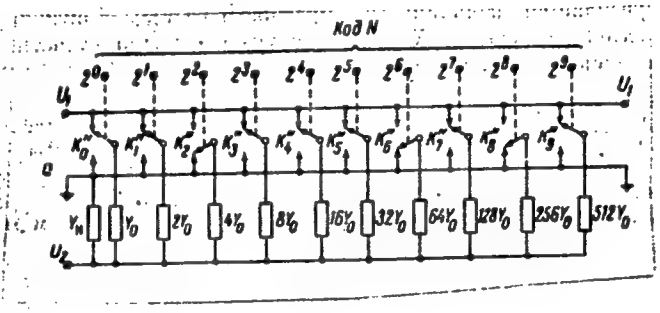
Electronic decoding and ...

bloc and 3 non-Soviet-bloc.

SUBMITTED: October 10, 1960

Legend to Fig. 3: Linear decoding converters with constant output resistance.



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S/035/62/000/008/088/090
A001/A101

4.7000
16.6810

AUTHORS: Smolov, V. B., Chigirev, A. A.

TITLE: A digital-analog computer for processing aerial photographs

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 8, 1962, 33 - 34, abstract 80271 ("Izv. Leningr. elektrotekhn. in-ta", 1961, no. 46, 50 - 73)

TEXT: The authors propose a digital-analog computer of continuous type provided with an additional accessory which ensures increased accuracy of the memory. The computer is connected with a stereocomparator and was devised for determining geodetic coordinates of the observed points of a stereopair. This determination is carried out automatically, by the method of the range base plane. It includes the following stages: Determination of mutual orientation elements by first-approximation formulae, displacement of the right-hand photograph in dependence on the mutual transverse inclination angle, determination of mutual orientation elements by two approximations, calculation of corrections to coordinates of the points, calculation of conditional coordinates, calculation of inclination angles and scale of the model, and calculation of geodetic coordinates

Card 1/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

S/115/62/000/005/003/C06
E140/E435

AUTHORS: Smirnov, N.V., Smolov, V.B., Fomichev, V.S., Chernyavskiy, Ye.A.

TITLE: Transistorized digital-analogue converter

PERIODICAL: Izmeritel'naya tekhnika, no.5, 1962, 29-32

TEXT: A digital-analogue converter developed at the LETI im. V.I.Ul'yanova (Lenina) in 1960-1961 is described. The system operates at frequencies not exceeding 50 kc/s, in the temperature range ± 60°C, with a precision of 0.01%. The full-scale voltage into loads of 10 to 250 k is of the order of 0.020 V. The relatively high precision is obtained by the use of saturated transistor switches in a balanced configuration (Fig.6) and a divided resistance summation network (Fig.5). The power supplies are stabilized to 0.05%; wire-wound resistors of the same tolerance are used. There are 7 figures and 1 table.

Card 1/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

S/146/62/005/001/006/011
D201/D302

9,3280

AUTHORS: Smolov, V.B. and Ugryumov, Ye.P.

TITLE: Methods of designing function converters with width modulation and averaging of voltages of special shape

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 5, no. 1, 1962, 40-46

TEXT: The authors consider a method of designing function converters (FC) which make it possible to obtain d.c. voltages or time intervals related to the input quantity by any functional relationship, The inputs may be d.c. voltages or in some cases, time intervals. The described FC circuits utilize either linear or functional width modulation of special shape voltages with subsequent averaging of the produced modulated pulse voltage. The FC circuits are based on configurations of pulse-time analogue circuits, in particular on a pulse voltage divider (VD). The VD is assumed to be linear, i.e. output voltage $U_2 = U_1$ (input voltage) and $U_2 = \frac{\tau}{T}$,

Card 1/3

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Methods of designing function ...

where τ and T are the two positions of the switch. $U_1(t)=f_1(t)$ used is a voltage of special shape - d.c., exponential, saw-tooth, sinusoidal etc. Since the output voltage is the d.c. voltage U_2, which with periodic changes of $U_1(t)$ is fully described by the mark-to-space ratio of the pulse voltage; such an operation is called the operation of functional width demodulation. The functional width demodulator (FWD) may thus be used as a VD to reproduce the dependence $U_{out}=F(\tau)$. The analogue operation of different VD bloc-arrangement is tabulated for d.c., sinusoidal, linear and exponential special voltage waveforms. Allowing for all possible errors the accuracy of VD circuits with FWD is stated to be between 0.1 and 1% of the max. value of input quantity and their speed of operation depends mainly on the time constant RC of the averaging network and corresponds roughly to a pass-band of 10-50 c/s. The presence in VD of a time dependent quantity makes it possible to use VD circuits in conjunction with typical units of digital computers in order to obtain a mixed, continuous

Card 2/3

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38635
S/103/62/023/006/010/012
D230/D308

AUTHORS: Smirnov, N.A., Smolov, V.B. and Fomichev, V.S. (Leningrad)

TITLE: Bridge electronic digital-to-analog functional converter

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 6, 1962, 802-817

TEXT: The authors deal with bridge digital-to-analog computers suitable for functional processing of digital data in accordance with the relations $N_z = F(N_x)$ and $N_z = \Phi(N_x, N_y)$, where N_x, N_y - input 'informing' digital data; N_z - output 'controlling' digital data. Both the theoretical and practical work were performed in the Kafedra vychislitel'noy tekhniki LETI im. V.I. Ul'yanova (Lenina) (Department of Computer Engineering LETI im. V.I. Ulyanov (Lenin)). In the case of transition from the digital output data to continuous data, rheostats or potential controlling sources should be connected into the corresponding arm of the bridge digital-to-analog computers.

Card 1/2

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D230/D308

Bridge electronic digital-to-analog ...

The computer circuits together with digital integrators can be used in the design of analog machine-hybrids in which, after feeding in and transforming continuous data into digital data, the solution follows the digital process without using d.c. amplifiers and the associated multiplication-division units. Since the bridge digital-to-analog computers possess composite characteristics of summators, multipliers, functional converters, they represent a rather simple form of an analog machine of its type; d.c. amplifiers assist in improving the stability and fast operation of these machines. Using precision wire-wound resistors and transistor switching elements, these converters yield statistical accuracy of the order of 8-11 binary digits. Their dynamic accuracy is wholly determined by the digital balancing reduction network. Due to its complexity, the analysis of the dynamic characteristics of the bridge digital-to-analog converters referring to non-linear pulsed closed systems was not investigated. There are 3 tables and 8 figures.

SUBMITTED: September 12, 1961

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLOV, V.B., kand.tekhn.nauk, dotsent; DUBININ, Ya.I., kand.tekhn.nauk, dotsent

Calculation of the accuracy of electromechanical cascade computing nets. Izv. LETI 57 no.39:126-139 '59. (MIRA 15:10)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

NAZAROV, I.A.; PEREL'MAN, A.L.; SMOLOV, V.B.; STEPAŠHKIN, G.I.; STERNIN, V.I.

Electronic calculator of the propagation velocity interval of elastic vibrations for an acoustical logging device. Geofiz. prib. no.9:46-64 '61. (MIRA 15:11)
(Logging (Geology)--Equipment and supplies)
(Electronic calculating machines)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

KAYUMOV, Yunas Mordanovich; SMOLOV, V.B., red.; SHILLING, V.A., red. izd-va; GVIRTS, V.L., tekhn. red.

[Use of ferrite-transistor cells in the construction of the arithmetical units digital computers and control machines] Ispol'zovanie ferrit-tranzistornykh iacheek dlia postroeniia arifmeticheskikh ustroistv tsifrovykh vychislitel'nykh i upravliaiushchikh mashin. Leningrad, 1962. 24 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Pribory i elementy avtomatiki, no.18) (MIRA 16:6)
(Electronic digital computers) (Automatic control)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

S/271/63/000/001/024/047
D413/D308

AUTHOR: Smolov, V.B.

TITLE: Cyclic functional pulse-count converters

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 1, 1963, 59, abstract 1A314 (Izv. Leningr. elektrotekhn. in-ta, no. 46, ~~1961~~ 1962, 42-49)

TEXT: The author considers design methods and principles of operation of cyclic functional pulse-count converters, suitable for reproducing the majority of functions of the form z = F(x) in which the argument x and the function z are proportional to corresponding numbers of pulses. These pulses are normally registered over the cycle by binary input and output electronic pulse counters. He considers methods of partly-stepwise and partly-linear approximation to discontinuous functions where the argument is given in cyclic pulsed form and gives block diagrams of cyclic functional converters for the variants considered. 4 figures. 1 reference.
[Abstracter's note: Complete translation]

Card 1/1

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMOLOV, V. B., kand. tekhn. nauk, dotsent; CHIGIREV, A. A., aspirant

Digital-analog computer for processing aerial photography prints. Izv. LETI 59 no.46:50-73 '62. (MIRA 15:10)

(Electronic data processing)
(Photography, Aerial)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

KAYUKOV, Anas Mardanovich; SMOLOV, V.B., red.; TELYASHOV, R.Kh., red.izd-va; SVIRTS, V.L., tekhn. red.

[Methods and means of control in digital and control computers] Metody i sredstva kontrolia v elektronnykh tsifrovykh vychislitel'nykh i upravliaiushchikh mashinakh. Leningrad, 1963. 18 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Seriia: Pribory i elementy avtomatiki, no.3) (MIRA 16:12)
(Electronic computers)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

BALASHOV, Yevgeniy Pavlovich; SMOLOV, V.B., red.

[Design of the magnetic system of memory devices using ferrite cores with rectangular hysteresis loops] Proektirovanie magnitnoi sistemy zapominaiushchikh ustroistv na ferritovykh serdechnikakh s priamougol'noi petlei gisterezisa; stenogramma lektsii. Leningrad, 1963. 39 p. (MIRA 17:6)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

LEBEDEV, A.N., red.; SKOLOV, V.B., red.

[Manual on a course project design of computers (for students of the Leningrad Electrical Engineering Institute)] Posobie k kursovomu proektirovaniiu schetno-reshaiushchikh ustroistv (dlia studentov LETI). Leningrad. No.6. 1963. 72 p. (MIRA 18:4)

1. Leningrad. Elektrotekhnicheskiy institut. Kafedra schetno-reshaiushchey tekhniki.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

L 12993-63 EWT(d)/FCC(w)/BDS ASD/ESD-3/APGC Pg-4/Pk-4/Po-4/Pq-4
GG/IJP(C)

ACCESSION NR: AP3001589 S/0102/63/000/003 /0023/0032

AUTHOR: Smolov, V. B. (Leningrad)

TITLE: Digital-analog functional converters

SOURCE: Avtomaty*ka, no. 3, 1963, 23-32

TOPIC TAGS: remote-control converters, digital-analog functional converters

ABSTRACT: Designing is considered of digital-analog converters by the methods and means that secure the simplest schemes, quick action, and adequate accuracy. Shaft-digit and voltage-digit types of coding and decoding converters are outlined. Only general features of converters are given in the article. Orig. art. has: 9 figures and 21 formulas.

ASSOCIATION: none

SUBMITTED: 15Jun59 DATE ACQ: 01Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 002 OTHER: 002

Card 1/1

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

L 11599-63 EWT(d)/FCC(w)/BDS ASD/ESD-3/APGC/SSD Pg-4/Pk-4/Po-4/ Pq-4 GG/IJP(C)

ACCESSION NR: AP3001370 S/0144/63/000/005/0597/0604 76

AUTHOR: Smirnov, N. A.; Smolov, V. B.; Fomichev, V. S.; Chernyavskiy, Ye. A.

TITLE: "Number-angle" decoder with intermediate conversion 16

SOURCE: IVUZ. Elektromekhanika, no. 5, 1963, 597-604

TOPIC TAGS: digital decoder, binary decoder

ABSTRACT: A simplified circuit is proposed for the decoding of binary-coded shaft rotation data, for the case where the angular resolution can be relatively low (8-11 bits). The design uses an intermediate conversion whereby the digital input is in effect converted to conductance and the variation in conductance controls the a-c voltage to the output motor. The basic operation is as follows: A double-ended a-c reference voltage with grounded center tap is connected across a parallel bank of transistor pairs. Each pair has a common emitter and collectors connected to opposite ends of the a-c bus. Each pair also represents one digital order. In a given pair one or the other transistor is switched on depending on whether the total input digital command has a "positive" or

Card 1/2

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ACCESSION NR: AP3001370 O

"negative" sense of angular rotation; thus the a-c current which is switched on has a forward or reverse phase sense. The sum of switched currents flows through a precision summing resistor, developing the control voltage for the output motor. The "positive" or "negative" condition is determined by the state of the highest order digit in the input code. Feedback is provided by a 20-turn potentiometer driven from the output shaft. An experimental model was built using standard parts for which a schematic is given including component values for the output a-c amplifier preceding the motor. Test results show that conversion error with a 10-digit code is about 0.1%, maintainable within a range of -50 to +60C. Reliability and the absence of reactive elements are cited as further advantages of the design. Orig. art. has: 3 tables, 5 figures, and 6 formulas.

ASSOCIATION: none

SUBMITTED:	19Jul62	DATE ACQ:	01Jul63	ENCL:	00
SUB CODE:	CP, CO	NO REF SOV:	002	OTHER:	000

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Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMIRNOV, N.A.; SMOLOV, V.B.

A good manual on digital computers. Priborostroenie no.9: 32 S '63. (MIRA 16:9)

1. Leningradskiy elektrotekhnicheskiy institut.
(Electronic digital computers)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

PETROV, B.K.; SMOLOV, V.B.; UGRYUMOV, Ye.P.

Transistor logarithmic time-to-pulse converter. Izm. tekh. no.9:29-32 S '63. (MIRA 17:1)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

L 17912-63 EWT(d)/FCC(w)/BDS ASD/ESD-3/APGC/IJP(C) Pg-4/Pk-4/Po-4
Pq-4 GG

ACCESSION NR: AP3005678 S/0146/63/006/004/0054/0062

AUTHOR: Smirnov, N. A.; Smolov, V. B.; Fomichev, V. S.; Chernyavskiy, Ye. A.

TITLE: Universal voltage-to-digital converter for d-c and a-c control systems

SOURCE: IVUZ. Priborostroyeniye, v. 6, no. 4, 1963, 54-62

TOPIC TAGS: code converter, volts-to-digits converter, control system, analog-to-digital converter, encoder

ABSTRACT: Results are reported of developing a universal voltage-binary-code converter intended for conveying input information to a digital computer from d-c and a-c sensors; the latter may have any frequency and phase. The compensation principle is used for the encoding method, the input voltage being balanced against a feedback voltage which is obtained from decoding a selected code in the register. The direction of every balancing step is determined by repeated tests

Card 1/2

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ACCESSION NR: AP3005678

at the half-cycle of the input voltage. A circuit diagram is presented and discussed of an encoder capable of encoding d-c voltages, slow-varying voltages, and 400-cps amplitude voltages. It is intended for a special-purpose digital computer. Orig. art. has: 5 figures and 6 formulas.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Lenina (Leningrad Electrotechnical Institute)

SUBMITTED: 07Jan63 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: CP NO REF SOV: 003 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

SMIRNOV, Nikolay Alekseyevich, starshiy prepodavatel'; SMOLOV, Vladimir Borisovich, kand.tekhn.nauk, dotsent; FOMICHEV, Vladimir Stepanovich, assistent; CHERNYAVSKIY, Yevgeniy Aleksandrovich, kand.tekhn.nauk

Decoding "number-angle" converter with intermediate transformation. Izv. vys. ucheb. zav.; elektromekh. 6 no.5:597-604 '63. (MIRA 16:9)

1. Kafedra vychislitel'noy tekhniki Leningradskogo elektrotekhnicheskogo instituta.

(Electronic computers)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

L 10321-63 BDS

ACCESSION NR: AP3001095 S/0103/63/024/006/0830/0838

AUTHOR: Smolov, V. B. (Leningrad); Ugryumov, Ye. P. (Leningrad)

46

TITLE: Pulse-spectrum function generator

SOURCE: Avtomatika i telemekhanika, v. 24, no. 6, 1963, 830-838

TOPIC TAGS: function generator, pulse-spectrum function generator

ABSTRACT: A function generator is theoretically considered in which pulse-duration and pulse amplitude modulations are combined and the result is expanded into a Fourier series. The system is illustrated by an example of a sine-type function generator where dc square pulses are first duration-modulated, then amplitude-modulated, and, finally, passed through a selective filter which isolates one of Fourier's harmonics. Possible static errors are analyzed, and some experimental verification of the system is reported. It is claimed that this type of function generator: (1) permits both multiplication and function conversion; (2) permits functional conversion of info supplied in the form of duration-modulated square pulses; (3) is suitable for use in digital-analog computers; (4) based on well-established standard electronic units. Orig. art. has: 7 figures and 22 formulas.

Card 1/2

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L 10321-63
ACCESSION NR: AP3001095

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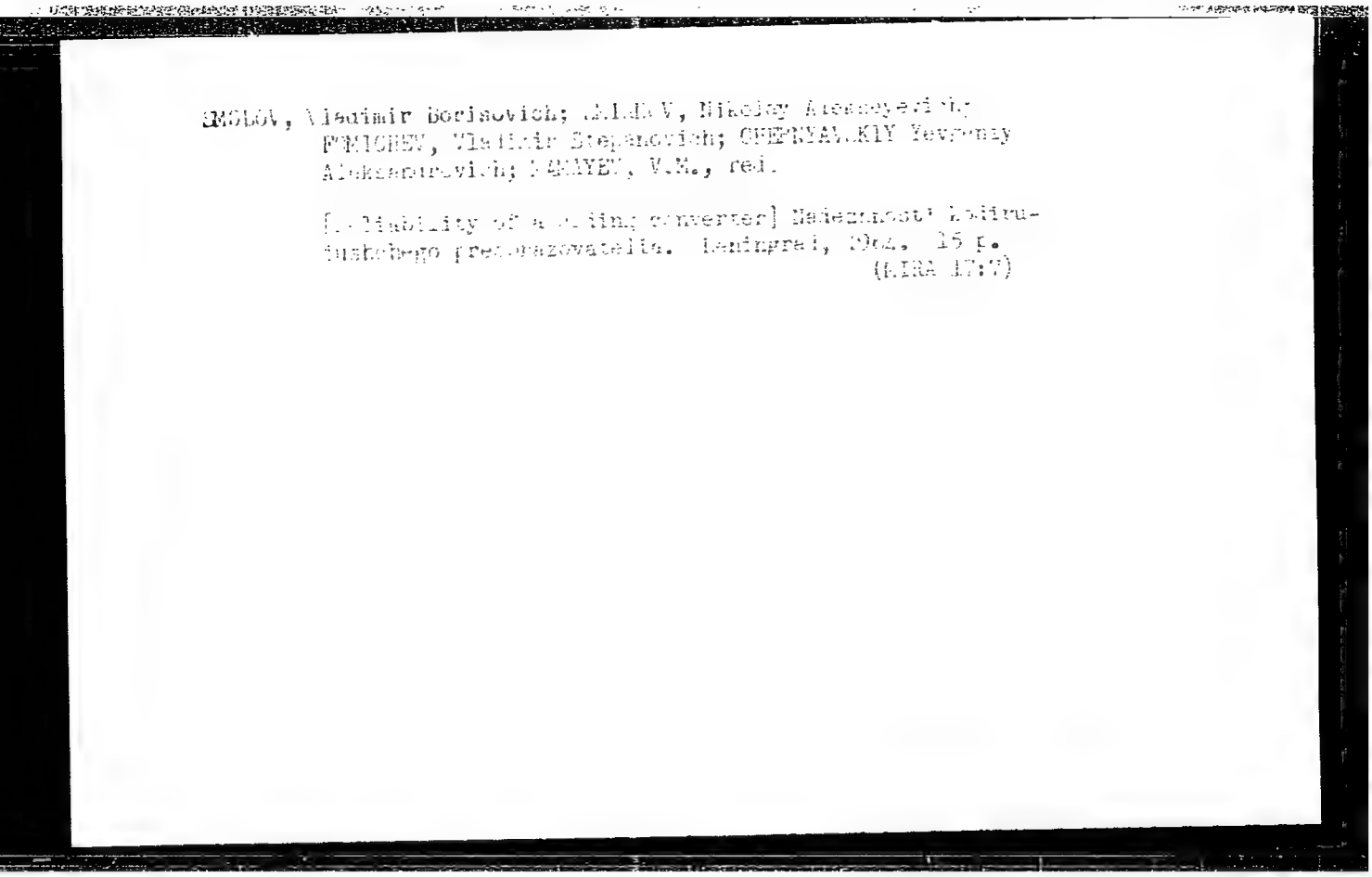
ASSOCIATION: none

SUBMITTED: 05Jun62	DATE ACQD: 01Jul63	ENCL: 00
SUB CODE: 00	NO REF SOV: 002	OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0



BOLOV, Vladimir Borisovich; [illegible], Nikolay Alekseyevich; FEDICHEV, Vladimir Stepanovich; CHERNYAVSKIY, Yevgeniy Alekseyevich; [illegible], V.M., red.

[Reliability of a welding converter] Nadezhnost' svarochnogo preobrazovatelia. Leningrad, Obz., 15 p. (MIRA 17:7)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

BALASHOV, Ye.P.; ILLOV, V.B., kand. tekhn. nauk, dots., otv. red.

[Design of magnetic-core components and systems of electronic computers; a textbook] Proektirovanie magnitnykh elementov i ustroistv elektronnykh vychislitel'nykh mashin; uchebnoe posobie. Leningrad, Leningr. elektrotekhn. in-t, 1964. 290 p. (MIRA 17:10)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

AM4037984 BOOK EXPLOITATION S/

Smolov, Vladimir Borisovich; Lebedev, Andrey Nikolayevich; Sapozhkov, Konstantin Andreyevich; Dubinin, YAkov Ivanovich; Smirnov, Nikolay Anisimovich; Bodunov, Vasiliy Pavlovich; Ugryumov, YEvgeniy Pavlovich; YAtsenko, Vladimir Pavlovich

Analog computers (Vy*chislitel'ny*ye mashiny* neprery*vnogo deystviya), Moscow, "Vy*sshaya shkola", 1964, 552 p. illus., biblio. 23,000 copies printed. Textbook for university students.

TOPIC TAGS: analog computer, automation, computer engineering

TABLE OF CONTENTS [abridged]:

Card 1/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

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SUB CODE: DP, MA SUBMITTED: 26Oct63 NR REF SOV: 004

OTHER: 000 DATE ACQ: 07May64

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

ACCESSION NR: AP4042112 S/0115/64/000/006/0033/0036

AUTHOR: Smolov, V. B.; Barashenkov, V. V.

TITLE: Time-interval-to-number function generator

SOURCE: Izmeritel'naya tekhnika, no. 6, 1964, 33-36

TOPIC TAGS: function generator, time to number converter

ABSTRACT: A new function generator suggested by the authors consists essentially of two units: (1) A time-to-number linear converter containing a conventional clock-pulse generator and a potential-pulse-coincidence section; (2) A number-number function generator based on a piecewise-linear approximator and yielding $Z=K_z N_z$, $K_z=\text{const}$. An experimental device was tested which generated $N_z=K\sin 2\pi\frac{N_x}{(N_x)_{max}}$ with these data: argument, N_x = 0—4,000 pulses; argument scale, $K_x=\frac{90}{4,000}$ degree/pulse; function, N_z = 0—256 pulses; function scale,

Card 1/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

ACCESSION NR: AP4024686 S/0103/64/025/002/0250/0261

AUTHOR: Smirnov, N. A. (Leningrad); Smolov, V. B. (Leningrad)

TITLE: Method of synthesizing integro-differential voltage-code-type coding converters

SOURCE: Avtomatika i telemekhanika, v. 25, no. 2, 1964, 250-261

TOPIC TAGS: automatic control, coding converter, analog digital converter, integrodifferential converter, voltage to code converter, digital automatic control

ABSTRACT: The authors' method is based on the fact that a "follow-up"-type coding converter with a reversible counter in the digital-code-selection circuit may be regarded as a closed-loop dynamic system. The system is treated as continuous because its quantization intervals are assumed to be small (h-f sync pulses). The converter transfer function (input voltage to output code) is realized by introducing dynamic integro-differential sections into the forward and feedback circuits. Passive RC fourpoles, twopoles, or digital filters or their combinations in the sampled-data lines of the converter may be used as the above sections in

Card 1/2

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ACCESSION NR: AP4024686

the voltage lines. The new converter is, in fact, an intermittent control system turned-on at discrete moments. As such, it has a number of additional potentialities: (a) signals may have the shape of an envelope and (b) integro-differential conversion of a-c signals is possible. Experimental verification on a laboratory model (simplified circuit diagram supplied) included these modes of operation: (1) a first-order smoothing section, (2) smoothing with compensation for the velocity dynamic error, and (3) integration and differentiation of the input voltage. Orig. art. has: 7 figures, 24 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 12Nov62 DATE ACQ: 15Apr64 ENCL: 00

SUB CODE: DP NO REF SOV: 003 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

KAZAKOV, Vyacheslav Anttipovich; SMOLOV, V.B., doktor tekhn. nauk prof., retsenzent; SAPOZHKOV, K.A., kand. tekhn. nauk, retsenzent; SANNIKOV, K.A., kand. tekhn. nauk retsenzent

[Calculating devices of analog computers] Vychislitel'nye ustroistva mashin nepreryvnogo deistviia. Moskva, Mashinostroenie, 1965. 427 p. (MIRA 18:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

ANISIMOV, B.V., [illegible]ERIKOV, V.[illegible], KOBRA[illegible] [illegible] Ye., [illegible] nauk, prof., retsenzent; SMOLOV, V.B., doktor tekhn. [illegible] prof., retsenzent

[Principles of the theory and design of digital computers] Osnovy teorii i proektirovaniia tsifrovykh vychislitel'nykh mashin. 2., ispr. i dop. izd. Moskva, Mashinostroenie, [illegible] 283 p. (MIRA 18:[illegible])

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L 58850-65 EED-2/EWA(h)/EWT(d)/EWT(l)/EWP(l) Pg-4/Pk-4/Pl-4/Pq-4/Peb
IJP(c) GG/BB

ACCESSION NR: AP5014002 UR/0119/65/000/005/0015/0017
621.032:681.142.621

35

AUTHOR: Kashchuk, A. P. (Engineer); Kurdikov, B. A. (Engineer); Smolov, V. B. (Doctor of technical sciences); Charnyavskiy, Ye. A. (Candidate of technical sciences)

B

TITLE: Universal semiconductor digital-to-analog function generator

SOURCE: Priborostroyeniye, no. 5, 1965, 15-17

TOPIC TAGS: function generator, digital analog function generator

ABSTRACT: A digital-to-analog time-function generator using the method of piecewise-linear approximation is described. Linear and nonlinear time-to-digit and digit-to-voltage intermediate converters are employed; they ensure a combination multiplying-function characteristic without resorting to multiplying units. The digit-to-voltage converter permits using either dc or ac as a carrier of the input and output continuous information; this fact is valuable in developing a-c cybernetic devices. A laboratory model of the generator designed to generate

$$\left.\begin{array}{l} U_2 \equiv \sin 0{,}5\pi\frac{t}{T};\ U_3 \equiv \sec\frac{\pi}{3}\frac{t}{T};\ U_4 \equiv \sqrt{\frac{t}{T}}, \\ U_5 \equiv \operatorname{tg}\frac{\pi}{3}\frac{t}{T};\ U_6 \equiv \ln k\frac{t}{T} \text{ при } \frac{t}{T} > 0{,}1 \end{array}\right\}$$

Card 1/2

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ACCESSION NR: AP5014002 0

with an error of 1% or less was built and tested by the authors. An experimental verification of the model showed its "complete agreement with the calculated parameters". Orig. art. has: 4 figures and 7 formulas.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: DP, EC

NO REF SOV: 004 OTHER: 000

Card 2/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720009-0

L 56504-65 EWT(d)/EWD-2/EWP(1) Pq-4/Pg-4/Pk-4 IJP(c) BB/GG

ACCESSION NR: AP5016757 UR/0286/65/000/010/0081/0081

681.142.621

37 B

AUTHOR: Smirnov, V. B.; Balashov, Ye. P.; Genkin, V. L.; Smolov, V. B.

TITLE: A device for converting binary code to Grey code. Class 42, No. 171158

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 10, 1965, 81

TOPIC TAGS: code converter, 16U binary code, computer component

ABSTRACT: This Author's Certificate introduces a device for converting binary code to Grey code. The unit contains a register for binary code reception. The device is made with pulse transformers to reduce the amount of equipment required and to improve reliability. The start of one output winding in the transformer for the i-th digit is connected to the start of the output winding in the transformer for the $(i-1)$-th digit. The end of the second output winding in the transformer for the i-th digit is connected to the end of the output winding for the $(i-1)$-th digit. The end and start of the first and second windings for the i-th digit are connected respectively through diodes to the output busses for the converted code.

Card 1/2

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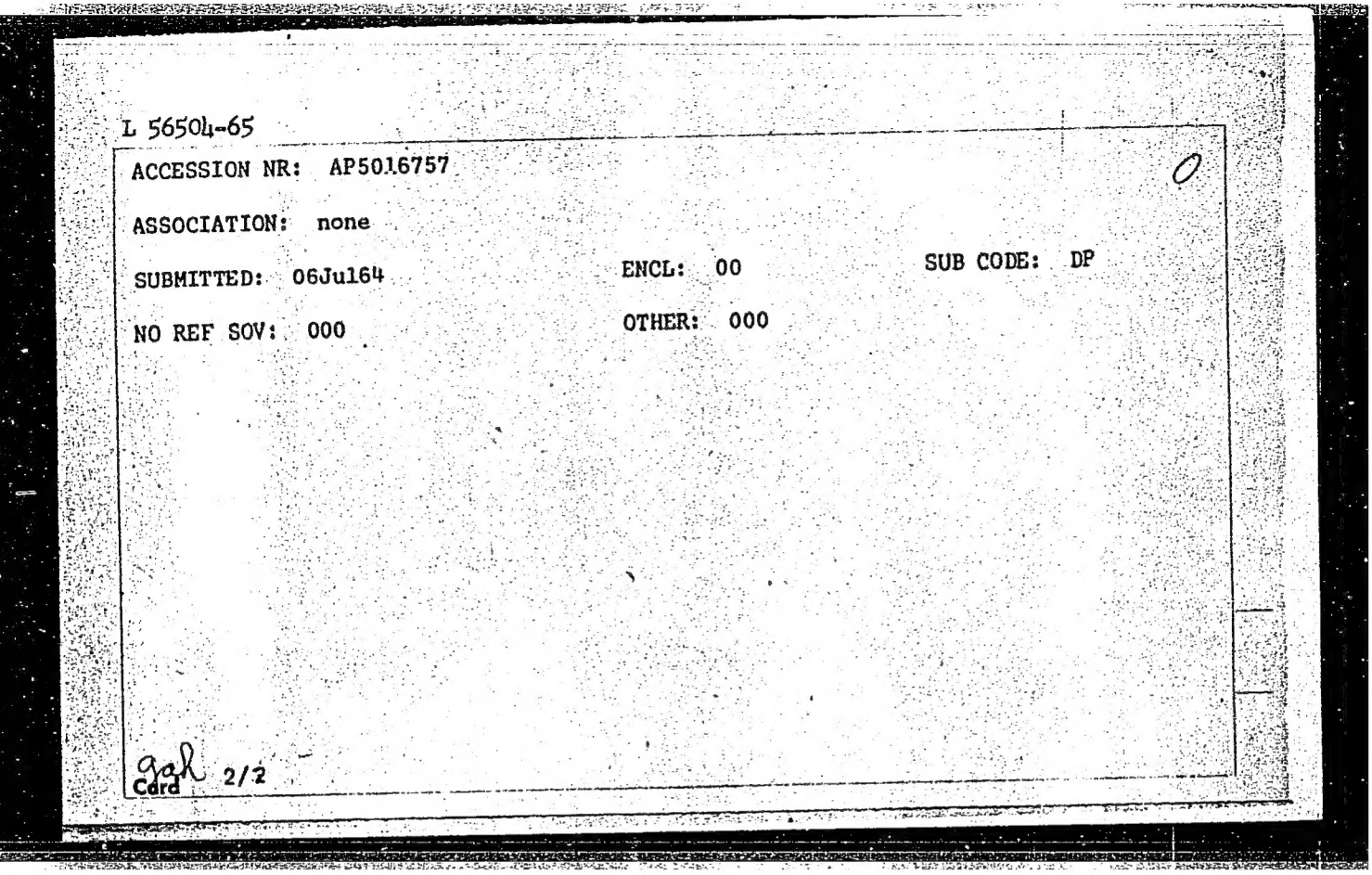

L 56504-65

ACCESSION NR: AP5016757

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ASSOCIATION: none

SUBMITTED: 06Jul64 ENCL: 00 SUB CODE: DP

NO REF SOV: 000 OTHER: 000

gah
Card 2/2

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L 56510-65 EWT(d)/EED-2/EWP(1) Pq-4/Pg-4/Pk-4/Pl-4 IJP(c) BB/GG

ACCESSION NR: AP5016773 UR/0286/65/000/010/0087/0088 44
681.142.621 43 B

AUTHOR: Grushvitskiy, R. I.; Smirnov, N. A.; Smolov, V. B.; Shmidt, V. K.; Fomichev, V. S.

TITLE: A precision voltage-to-code converter. 16 Class 42, No. 171182

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 10, 1965, 87-88

TOPIC TAGS: voltage to code converter, computer component, computer technology, voltage divider

ABSTRACT: This Author's Certificate introduces a precision voltage-to-code converter constructed according to the method of sequential comparison with a single standard, subtraction, multiplication by two, and storage of the result. Conversion accuracy is improved by making the storage circuit in the form of two digital counting systems with balancing by digital places. The weight of each least significant digit in the counting systems is greater than the weight of the steps of the preceding least significant digit. The output of one of the counting systems is connected through a pulsed voltage divider to two comparison circuits for voltage

Card 1/3

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ACCESSION NR: AP5016773

multiplication. The input voltage is fed to the second input of one comparison circuit while the second input of the other comparison circuit is connected to the output of the second digital counting system. This output is connected to the first input of a third comparison circuit, and to a fourth and fifth comparison circuit through a standard source for subtraction of the reference voltage. The second input of the third comparison circuit is connected to the output of the first counting system. The second input of the fourth and fifth comparison circuits are connected respectively to the input voltage and to the output of the first digital counting system.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Electrical Engineering Institute)

SUBMITTED: 16Dec63 ENCL: 01 SUB CODE: DP

NO REF SOV: 000 OTHER: 000

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L 56510-65

ACCESSION NR: AP5016773

ENCLOSURE: 01

0

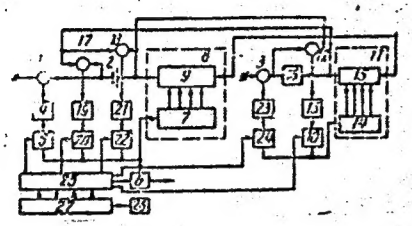

Fig. 1. 1, 3, 12, 17 and 18--comparison circuits; 2--standard source; 4, 13, 19, 21 and 23--amplifiers; 5, 6, 10, 20, 22 and 24 --logic circuits; 7 and 14--control circuits for the digital counting systems; 8 and 11--digital counting systems; 9 and 15--code-to-voltage converters; 16--pulsed voltage divider; 25--control unit; 26-- --pulse generator; 27--synchronization unit

Card 3/3

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